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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 13

Complete if Known	
Application Number	
Filing Date	September 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number: Number - Kind Code[2] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US-1,947,020	02-13-1934	Ranger	
	A2	US-3,493,669	02-03-1970	Elbrecht et al.	
	A3	US-3,591,699	07-06-1971	Cutler	
	A4	US-3,612,741	10-12-1971	Marshall	
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	A8	US-3,805,091	04-16-1974	Colin	
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Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3] - Number[4] - Kind Code[5] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	B1	EP-0 574 213-A1	12-15-1993	Synaptics, Inc.		

Examiner Signature		Date Considered	1/28/05

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	A22	US-4,781,099	11-01-1988	Koike	
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Examiner Name	
Attorney Docket Number	2738-17

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Sheet 4 of 13

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Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

U.S. PATENT DOCUMENTS

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MJF	A61	US-6,100,461	08-08-2000	Hewitt	
	A62	US-6,140,565	10-31-2000	Yamauchi et al.	
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	A68	US-6,363,159 B1	03-26-2002	Rhoads	
	A69	US-6,392,705 B1	05-21-2002	Chaddha	
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Examiner Initials*	Cite No.[1]	Foreign Patent Document: Country Code[3] - Number[4] - Kind Code[5] (*if known*)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

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Sheet 5 of 13

Complete if Known	
Application Number	
Filing Date	September 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	C1	"Biax True Stereo Pickups," product description, Musician's Friend catalog.	
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	C3	"Synaptics Targets Vision, Sound processing."	
	C4	"Yamaha VL1", advertisement, Electronic Musician, Apr. 1994.	
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	C6	Biaxe Ragamaster, Box 15426, Stamford, CT, 06901-0426, USA.	
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	C8	BORMANS, JAN "MPEG-4 systems need specialized CPUs", Electronic Engineering Times, Jan. 25, 1999.	
	C9	Boss DF-2, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
	C10	Boss OC-2 Service Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles 90040-3696, CA, USA.	
	C11	Boss SE-70 Super Effects Processor Algorithm Guide, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	

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Sheet 6 of 13

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	C12	Boss SE-70 Super Effects Processor Owners Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
	C13	CP-40 Pitch to Midi Converter, Roland, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
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	C15	DP/4, Ensonlq, 155 Great Valley Parkway, Malvern, PA 19355, USA.	
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	C17	EPSTEIN, "The Search for New Chemical Oscillators," in Chemical Instabilities, Nicolis and Baras (eds.), 1984, D.Reidel Publishing, Dordrecht/Boston/Lancaster.	
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	C23	GI-10 Guitar-Midi Interface, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
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	C36	LIM, AGRAWAL, and NEKLUDOVA "A Fast Algorithm for Labeling Connected Components in Image Arrays", Technical Report Series, No. NA86-2, Thinking Machines Corp., 1986 (rev. 1987), Cambridge, Mass., USA.	
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	C38	LUDWIG, L., "A Generalized Linear Amplitude Processor," Electronotes, Dec. 1979, vol. 11, No. 108.	
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MS	C44	MS4-MS3 Solton, Ketron lab, dist. By Bell Douvox Corp. 126 Rt. 303, 10994 W. Nyack, NY, USA.	

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Sheet 9 of 13

Complete if Known	
Application Number	
Filing Date	September 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	C45	MURPHY, AAMODT, Spicer and Royce (eds) Photoacoustic and Photothermal Phenomena II, 1990, vol. 62, Springer-Verlag, Berlin Heidelberg, Germany.	
	C46	NAGY-UNGVARAI, Z. and HESS, BENNO "Control of Dynamic Pattern Formation in the Belous-ov-Zhabotinsky Reaction" Physica D (1991) North-Holland.	
	C47	NICOLIS, G and BARAS, F (eds.), Chemical Instabilities, 1984, D.Reidel Publishing, Dordrecht/Bos-ton/Lancaster.	
	C48	NICOLIS, G., "Nonlinear Phenomena in Chemistry", Introduction to Nonlinear Science, 1995, Cambridge University Press, Great Britain.	
	C49	Omnichord OM-250m, Suzuki, Box 261030, San Diego, CA 92196, USA.	
	C50	ORBAN, M., KURIN-CSORGEI, K., ZHABOTINSKY, A, and EPSTEIN, I, "New Indicators for Visual-izing Pattern Formation in Uncatalyzed Bromate Oscillatory Systems", J. Am. Chem. Soc. 1998, Vol. 120, pp. 1146-1150.	
	C51	PC-1600 Midi Controller, Peavy Corporation, 711 A St., Meridan, MS 39302-2898, USA.	
	C52	PENNYWITT, KIRK "Robotic Tactile Sensing," Byte, Jan., 1986.	
	C53	PLM 8128E, Peavey, Corporation, 711 A St., Meridan, MS 39302-2898, USA.	
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First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
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	C56	RICH, ROBERT "Buchla Lightning MIDI Controller", Electronic Musician, Oct. 1991.	
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	C58	ROADS, C., "A Tutorial on Non-linear Distortion or Waveshaping Synthesis," Computer Music Journal, Vol. 3, No. 2, pp. 29-34, June 1979, People's Computer Company, Menlo Park, CA, USA.	
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	C60	Roland's COSM: A Whole New World of Sounds, Kikumoto/Meyer, Roland Users' Magazine. 7200 Dominion Circle, Los Angeles , CA, 90040-3696, USA.	
	C61	RONSE, CHRISTIAN and DEVIJVER, PIERRE A., Connected Components in Binary Images: the Detection Problem, 1984, Research Studies Press/ John Wiley & Sons Inc., New York, NY, USA.	
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	C66	SGE MACH II, Applied Research and Technology, 215 Tremont St., Rochester, NY 14608, USA.	

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Sheet 11 of 13

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First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

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	C68	SLAWSON, WAYNE, Sound Color, 1985, University of California Press, Berkeley, CA, USA.	
	C69	SNELL, JOHN M. "Sensors for Playing Computer Music with Expression", Proceedings of the Intl. Computer Music Conf. at Eastman, 1983.	
	C70	Switchblade 16, Sound Sculpture, 5741 Arapahoe Rd. Ste. 2a Boulder, CO 80303, USA.	
	C71	Synthophone, Softwwind Instruments, 304 Newbury St. Ste. 323, Boston, MA 02155, USA.	
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	C73	The Fretless Wizard, Biaxe, P.O. Box 15426, Stamford, CT, 06901-0426, USA.	
	C74	Trilogy, Hipshot Music Prods. Van Nuys, NY, USA.	
	C75	TYSON, JOHN J., The Belousov-Zhabotinskii Reaction, Springer-Verlag, Berlin/Heidelberg, Germany.	
	C76	Unlocking the Secrets of HRM (Harmonic Restructure Modeling), Craig Anderton, Roland Users' Magazine. 7200 Dominion Circle, Los Angeles, CA 90040-3696, USA.	
	C77	Various 6D Tracking Products, Ascension Technology Corporation, PO Box 527, Burlingame, VT 05402 USA.	

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Sheet 12 of 13

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Application Number	
Filing Date	Septemb r 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

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	C79	VG-8 Users Manual, Roland Corporation, 7200 Dominion Circle, Los Angeles, CA, 90040-3696, USA.	
	C80	VIBERG, MATS, Subspace Fitting Concepts in Sensor Array Processing, Linkoping Studies in Science and Technology, 1989, Dissertations No. 27 Linkoping, Sweden.	
	C81	VISINTIN, A. (ed.), Models of Hysteresis, Longman Scientific & Technical,1993, Harlow, En-gland.	
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	C83	WESSEL, C., "A Tuturial on Non-linear Distribution or Waveshaping Synthesis", Computer Music Journal, Jun. 1979, Vol. 3, No. 2, pp. 29-34, People's Computer Company, Menlo Park, CA., USA.	
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	C85	WINCKEL and FRITZ, Music Sound, and Sensation: A Modern Exposition, 1967, Dover, New York, USA.	
	C86	Wind Machine, Anatek, Creation Technologies, 400 Brooksbank Ave. B.C. Canada V7J-1G9	
	C87	WX11 and Wt11, Yamaha, 6600 Orangethorpe Ave., Box 6600, Buena Park, CA, USA.	
	C88	XSDR AI2 Synthesizer Module, KORG, Suginamiku, Tokyo, Japan.	

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Application Number	
Filing Date	September 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	
Examiner Name	
Attorney Docket Number	2738-17

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	C89	Yamaha FS1R, Electronic Musician, Dec., 1998.	
	C90	Yamaha WX11 and WT11, Midi Magazine Mar./Apr. 1994.Yamaha Corp. of America, 6600 Orangethorpe Ave., PO Box 6600 Buena Park, CA 90622-6600, 714 522-9011.	
	C91	ZTAR Midi Fingerboard Controllers-Starr Instruments/Starr Switch, 1717 Fifth Ave., San Diego, CA 92101, USA.	

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Sheet 1 of 1

Complete If Known	
Application Number	10/677,032
Filing Date	September 30, 2003
First Named Inventor	Lester F. Ludwig
Group Art Unit	2837
Examiner Name	Marlon T. Fletcher
Attorney Docket Number	2738-17

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number: Number - Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A71	257,808	05-09-1882	Zimmermann	
	A72	360,830	10-09-1886	Wigand	
	A73	559,784	05-05-1896	Back	
	A74	625,896	05-30-1899	Young	
	A75	4,175,466	11-27-1979	Arghis	
	A76	4,506,563	03-26-1985	Newton	

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